

REMARKS

The Office Action dated January 31, 2006 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-23 are currently pending in the application and are respectfully submitted for consideration.

In the Office Action, claims 1-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zadeh (U.S. Patent No. 6,047,182) in view of Fischer (U.S. Patent No. 6,295,455). The Office Action took the position that Zadeh discloses all of the elements of the claims, with the exception of “handing over the user equipment for communicating on a second channel with a second different serving base station, wherein said determination of the location of the user equipment is suspended until said handing over from the first serving base station to the second different base station has been completed.” The Office Action then cites Fischer as allegedly curing this deficiency in Zadeh. The rejection is respectfully traversed for the reasons which follow.

Claim 1, upon which claims 2-8 and 22-23 are dependent, recites a method of locating user equipment in a communication network. The method includes requesting a location of user equipment which is communicating on a first channel with a first serving base station, initiating a determination of the location of the user equipment, and handing over the user equipment for communicating on a second channel with a second different serving base station. The determination of the location of the user equipment is

suspended until said handing over from the first serving base station to the second different base station has been completed.

Claim 9, upon which claims 10-12 are dependent, recites a system for locating user equipment in a communications network. The system includes a location entity and a controller configured to send a request to the location entity for locating user equipment which is configured to communicate on a first channel with a first serving base station. The location entity is configured to initiate a determination of a location of said user equipment. When the user equipment is being handed over to communicate on a second channel with a second different serving base station, the location entity is configured to suspend the determination of the location of the user equipment until handing over from the first serving base station to the second different serving base station has been completed.

Claim 13 recites a location entity for use in a system for locating user equipment in a communications network, the system including a controller. The location entity is configured to receive a request from a controller for locating user equipment which is configured to communicate on a first channel with a first serving base station, and initiate a determination of a location. The location entity is configured so that when the user equipment is being handed over to communicate on a second channel with a second different serving base station, determination of the location of the user equipment is suspended until said handing over from the first serving base station to the second different serving base station has been completed.

Claim 14, upon which claims 15-21 are dependent, recites a system for locating user equipment in a communication network. The system includes requesting means for requesting a location of user equipment which is communicating on a first channel with a first serving base station, initiating means for initiating a determination of the location of the user equipment, and handing over means for handing over the user equipment for communicating on a second channel with a second different serving base station. The determination of the location of the user equipment is suspended until said handing over from the first serving base station to the second different serving base station has been completed.

As will be discussed below, Zadeh and Fischer, whether viewed individually or combined, fail to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above.

Zadeh discloses a communications system and method for managing physical channels during a positioning handover to a target Base Transceiver Station (BTS). Zadeh allows for a positioning handover to occur from one channel type, such as a traffic channel of the serving BTS, to another channel type, such as a control channel of the target BTS. When congestion on one type of channel in the target cell occurs, the other type can be used.

Fischer discloses a method for locating a mobile station in a mobile telecommunications network without noticeably degrading the quality of service experienced by the user. A mobile station is configured to generate and uplink transmit

position measuring data prior to or during a call connection, without noticeably interrupting the user or degrading the quality of service provided. Position measuring data is uplink transmitted over an idle traffic channel during a call set up operation while the call connection is being completed. The position measuring data can also be uplink transmitted during a call by selectively stealing data positions or burst positions in the uplink signal. The position measuring data is received by a plurality of base stations and is then used to determine a current approximate geographical location of the mobile station.

Applicants respectfully submit that the combination of Zadeh and Fischer fails to disclose or suggest all of the elements of the present claims. For example, Zadeh and Fischer do not disclose or suggest that the “determination of the location of the user equipment is suspended until said handing over from the first serving base station to the second different base station has been completed,” as recited in claims 1, 13, and 14, and similarly recited in claim 9. The Office Action, as discussed above, acknowledges that Zadeh fails to teach this feature of the claims. However, the Office Action relies upon Fischer as allegedly disclosing this feature. Applicants respectfully disagree and submit that both Zadeh and Fischer fail to disclose or suggest the above-recited feature of the claims.

Fischer teaches that the transmission of position measuring data should not effect the transmission of more important signaling data, and, therefore, makes it possible to delay the transmission of the position measuring data in order to make way for critical

signaling data (Fischer, Column 10, lines 5-11, and Fig. 3). Consequently, the manner in which data bursts are stolen in order to transmit position measuring data on a channel must take into account the type of data being transmitted in the data bursts. However, Fischer is concerned with a method relating to the insertion of position measuring data into a channel, and for the call connection between the mobile station and a base transceiver station (Fischer, Fig. 3). Therefore, Fischer does not disclose or suggest that the method should be implemented during handoff from a first serving base station to the second different serving base station, as recited in the present claims.

Fischer further discloses a method of controlling the transmission of positioning data during handoff. Fischer specifically discloses that “position measuring data can be transmitted during or following a handover operation” (Fischer, Column 14, lines 54-56). The operation of the system during handoff is determined by setting a flag to instruct both the mobile station and the location measurement units to perform one of: (1) continue transmitting positioning data over a previously used channel after handoff to a new channel, (2) stop all transmission of positioning data, or (3) postpone handoff to the new channel until the positioning data has been transmitted (Fischer, Column 14, line 62 – Column 15, line 5).

Applicants respectfully submit that none of the options disclosed by Fischer correspond to suspending the determination of the location of the mobile station during the handover operation, as recited in the present claims. Rather, the first and third options of Fischer, as outlined above, teach the continuation of the positioning operation

through the handoff procedure. The second option disclosed by Fischer teaches that the mobile station should stop the transmission of positioning data and perform the handover as ordered. Fischer does not disclose or suggest if or how the transmission of positioning data might continue once the handover has been successfully completed. As such, Applicants respectfully submit that stopping the transmission of positioning data as disclosed by Fischer does not correspond to suspending the determination of the location of the user equipment, as recited by the present claims.

According to embodiments of the present invention, while the determination of the mobile station position is suspended, it is not necessary for the mobile station to stop the transmission of positioning data nor is it necessary to provide any command or indicator to the mobile station to begin transmission once handover is completed. In contrast, Fischer teaches the continuation of the transmission of positioning data through the handoff procedure or, alternatively, that the transmission of positioning data should stop completely thereby allowing a new positioning operation to be started once handoff has been completed. Accordingly, Fischer fails to disclose or suggest that the determination of the location of the mobile station should be suspended during the handoff procedure as recited in the present claims. Zadeh, as acknowledged in the Office Action, also fails to disclose or suggest this limitation of the claims.

For at least the reasons discussed above, Applicants respectfully submit that the combination of Zadeh and Fischer fails to disclose or suggest that the “determination of the location of the user equipment is suspended until said handing over from the first

serving base station to the second different base station has been completed,” as recited in claims 1, 13, and 14. Similarly, the combination of Zadeh and Fischer does not disclose or suggest that “the location entity is configured to suspend the determination of the location of the user equipment until handing over from the first serving base station to the second different serving base station has been completed,” as recited in claim 9. Consequently, Applicants respectfully request that the rejection of claims 1, 9, 13, and 14 be withdrawn.

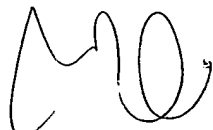
Applicants note that claims 2-8, 10-12, and 15-23 are dependent upon claims 1, 9, and 14, respectively. Therefore, claims 2-8, 10-12, and 15-23 should be allowed for at least their dependence upon claims 1, 9, and 14, and for the specific limitations recited therein.

Applicants respectfully submit that the cited prior art fails to disclose or suggest critical and important elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-23 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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